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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/557,830	11/22/2005	Christopher John Pavey	046812/303649	6084
826	7590	01/30/2008		
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			EXAMINER TALBOT, MICHAEL	
			ART UNIT 3722	PAPER NUMBER
			MAIL DATE 01/30/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/557,830

Applicant(s)

PAVEY ET AL.

Examiner

Michael W. Talbot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 83-104 is/are pending in the application.
- 4a) Of the above claim(s) 101 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 83-100 and 102-104 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/22/05 & 11/28/06.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 83-100 and 102-104, drawn to a rotary tool holder apparatus assembly for high speed rotation.

Group II, claim(s) 101, drawn to a method of manufacturing a rotary tool holder assembly for high speed rotation.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Inventions I and II - the common features are a tool holder, a collet, a shaft, and an applied friction reducing coating. These features are not considered "special" with respect to the Rotary Tool Holder art, and therefore the inventions do not share the same or corresponding "special technical feature".

3. There is an examination and/or search burden for these patentably distinct inventions due to their mutually exclusive characteristics. The inventions require a different field of search (e.g. searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one invention would not likely be applicable to another invention; and/or the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

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4. During a telephone conversation with Mr. Donald M. Hill, Jr. on Wednesday, 23 January 2008 a provisional election was made with traverse to prosecute the invention of Group 1, claims 83-100 and 102-104. Affirmation of this election must be made by applicant in replying to this Office action. Claim 101 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

6. The disclosure is objected to because of the following informalities:

Refer to page 10, line 18, character reference "shaft 2" should be changed so as to read --shaft 1--.

Appropriate correction is required.

Claim Objections

7. Claims 83,85,96 and 102 are objected to because of the following informalities:

Claim 83 recites the limitation "the inner surface" in line 5, again in line 6, again in line 11, and again in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim 83 recites the limitation "the outer surface" in lines 5 through 6, again in line 6, again in line 11, and again in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim 83, line 7, the word "front" should be changed so as to read --from--.

Claim 83 recites the limitation "the taper angle" in line 8, and again in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 83 recites the limitation "the substantial fit" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 85, lines 2-4, the phrase "at least one of the collet and the shaft are tapered so that axial movement of the collet relative to the shaft one of causes and allows the jaw portions" is awkwardly written and therefore must be rewritten to clearly and grammatically describe applicant's claimed limitation.

Claim 85 recites the limitation "the axis" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 96, lines 2-4, the phrase "at least one of the collet and the shaft are tapered so that axial movement of the collet relative to the shaft one of causes and allows the jaw portions" is awkwardly written and therefore must be rewritten to clearly and grammatically describe applicant's claimed limitation.

Claim 96 recites the limitation "the axis" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 102 recites the limitation "the inner surface" in line 5, again in line 6, again in line 11, and again in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim 102 recites the limitation "the outer surface" in two occurrences in line 6, again in line 11, and again in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim 102 recites the limitation "the taper angle" in line 8, and again in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 83 recites the limitation "the substantial fit" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 83-85 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2002126919 A. JP 2002126919 A shows in Figures 1-6B a rotary tool holder assembly for high speed rotation comprising a collet (11,31) and a shaft (21,32), wherein the collet being moveable relative to the shaft between a tool gripping position in which an inserted tool can be gripped for rotation and a tool release position, and wherein the shaft comprises a bore (Figs. 1 and 4-6B) for receiving the collet. JP 2002126919 A further shows the shaft and collet shaped such that when the rotary tool holder assembly is rotated at a high speed, an inner tapered surface (22,37) of the shaft bore substantially fits an outer tapered surface (14,35) of the collet, wherein the tapering is radially inwardly away from a tool receiving mouth (Figs. 1 and 4-6B) of the collet such that when the rotary tool holder is stationary, a taper angle of the collet is greater than a taper angle of the shaft (Figs. 6A,6B). JP 2002126919 A further shows there is relative deformation between an outer surface of the collet and an inner surface of the shaft bore to give a substantial fit there between (Figs. 1 and 4-6B), wherein a friction reducing coating (38 and Figs. 1-3)) is provided between at least a portion of an inner surface of the shaft and an outer surface of the collet. JP 2002126919 A further shows at least part of an outer surface of the collet which faces the inner surface of the shaft bore is coated

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with a friction reducing coating (Figs. 1-3). JP 2002126919 A shows the collet comprising a plurality of jaw portions (at 34 formed between grooves 33) for gripping an inserted tool, at least one of the collet and the shaft are tapered so that axial movement of the collet relative to the shaft one of causes and allows the jaw portions of the collet to move in a direction transverse to an axis of the collet for gripping and releasing of an inserted tool.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 86-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002126919 A in view of Pruvot et al. (US 4,791,841). JP 2002126919 A lacks the collet being carried by a bobbin arranged for axial movement within a bore of the shaft, wherein a spring, disposed in a spring receiving bore, acting on the bobbin is provided for biasing the collet towards the gripping position.

Pruvot et al. '841 shows in Figure 1 a rotary tool holder (1) for high speed rotation comprising a collet (12), a shaft (4,5) and a bobbin (15,16) arranged for axial movement within a bore of the shaft, wherein a spring (17), disposed in a spring receiving bore (at 18) of the shaft, acting on the bobbin is provided for biasing the collet towards the gripping position (abstract and col. 2, lines 40-50). In view of this teaching of Pruvot et al. '841, it would have been obvious to one of ordinary skill in the art to modify the rotary tool holder of JP 2002126919 A to include a biased bobbin member attached to the collet as taught by Pruvot et al. '841 to facilitate smooth, uninterrupted axial movement

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of the collet, thus improving the inserted tool gripping and release operations of the rotary tool holder.

12. Claims 89-91,93-99 and 102-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002126919 A in view of Pruvot et al. (US 4,791,841), further in view of Srebot et al. (US 4,943,071). JP 2002126919 A in view of Pruvot et al. '841 lacks the spring itself and/or the spring receiving bore housing the spring being coated with a friction reducing coating.

Srebot et al. '071 shows in Figure 3 a rotary tool holder for high speed rotation comprising a collet (26), a shaft (13) and a bobbin (22) arranged for axial movement within a bore of the shaft, wherein a spring (52) and/or a spring receiving bore (Fig. 3) housing the spring being coated with a friction reducing coating (53). In view of this teaching of Srebot et al. '071, it would have been obvious to one of ordinary skill in the art to modify the rotary tool holder of JP 2002126919 A in view of Pruvot et al. '841 to include a friction reduced coating on the spring and/or spring receiving bore as taught by Srebot et al. '071 to facilitate smooth, uninterrupted axial movement of the spring within the spring receiving bore, thus improving the inserted tool gripping and release operations of the rotary tool holder.

In the alternative, with regards to applying a friction reducing coating to specific components of the rotary tool holder, Examiner has taken Official Notice that it is well known in the art for moving components in contact with one another to be treated with a friction reducing coating to lower the friction coefficient between the components, thus reducing wear and tear of the individual components resulting in an improved movement between the moving components. In view of this teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the front

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panel cover of McMillan '197 in view of Ruble '784 to include a multi-ply cover/panel construction to provide a more durable protection of the book stored within.

13. Claim 92 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002126919 A. JP 2002126919 A teaches a rotary tool holder having an applied friction reducing coating, but is silent as to the specific type of process used to apply the coating. The claimed phrase "the coating is applied to parts using a low temperature process to avoid changing the properties of the materials of the coated components" is being treated as a product by process limitation; that is, that the rotary tool holder is being applied a friction reducing coating by an undisclosed process. As set forth in MPEP 2113, product by process claims are NOT limited to the manipulations of the recited steps, only to the structure implied by the steps. Thus, even though JP 2002126919 A is silent as to the process used to apply the coating on the rotary tool holder, it appears that the product in JP 2002126919 A would be the same or similar as that claimed.

14. Claim 100 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002126919 A in view of Pruvot et al. (US 4,791,841), further in view of Srebot et al. (US 4,943,071). JP 2002126919 A in view of Pruvot et al. '841, further in view of Srebot et al. '071 teaches a rotary tool holder having an applied friction reducing coating, but is silent as to the specific type of process used to apply the coating. The claimed phrase "the coating is applied to parts using a low temperature process to avoid changing the properties of the materials of the coated components" is being treated as a product by process limitation; that is, that the rotary tool holder is being applied a friction reducing coating by an undisclosed process. As set forth in MPEP 2113, product by process claims are NOT limited to the manipulations of the recited steps, only to the structure implied by the steps. Thus, even though JP 2002126919 A is silent as to the process

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used to apply the coating on the rotary tool holder, it appears that the product in JP 2002126919 A would be the same or similar as that claimed.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. Any inquiry concerning the content of this communication from the examiner should be directed to Michael W. Talbot, whose telephone number is 571-272-4481. The examiner's office hours are typically 8:30am until 5:00pm, Monday through Friday. The examiner's supervisor, Mrs. Monica S. Carter, may be reached at 571-272-4475.

In order to reduce pendency and avoid potential delays, group 3720 is encouraging FAXing of responses to Office Actions directly into the Group at FAX number 571-273-8300. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers, which require a fee, by applicants who authorize charges to a USPTO deposit account. Please identify Examiner Michael W. Talbot of Art Unit 3722 at the top of your cover sheet.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



MWT
Examiner
24 January 2008


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